Hardware Announcement
October 21, 2003

New IBM ThinkPad R40 entry model features a one-year warranty

Overview

The new entry model of the ThinkPad® R40 notebook is ideal for small and medium businesses, educational institutions, and professionals. It comes with a one-year limited warranty.

Feel the power

- Intel™ Centrino Mobile Technology:
  - Intel PRO/Wireless network connection 802.11b
  - Intel 855 PM chipset
- Integrated 10/100 Ethernet and 56 K V.90 modem (V.92-designed)
- Microsoft™ Windows™ XP Home and selected applications installed
- System memory expandable to a maximum of 2.0 GB[4]

Count the benefits

- Sleek[5] design; 38.8-mm (1.53-in) slim
- 358.1-mm (14.1-in) TFT display
- 16 MB ATI Mobility Radeon video chipset
- New easy-loading Ultrabay™ Plus modular drive bay, optional ThinkPad Port Replicator II, and PC card slot
- 24x-10x CD-ROM[6]
- 20 GB[7] HDD
- Access IBM button; ThinkLight® keyboard light; individual volume up, down, and mute buttons
- UltraNav™ dual-pointing system, featuring TrackPoint® and customized touch pad
- RJ-45 and RJ-11 connectors; standard ports including S-Video out

ImageUltra™ services

Selected ThinkPad notebooks are enabled for ImageUltra. For more information, visit:

http://www.pc.ibm.com/us/accessories/services/imageultra.html

Excellent service

- EasyServ on-site pickup and delivery
- One-year limited warranty with 24-hour, 7-day-a-week HelpCenter® support for warranty issues during the warranty period (response times may vary and may exclude some holidays)

Planned availability date

October 28, 2003

At a glance

The new ThinkPad R40 entry notebook offers the best blend of portability and essential features, including:

- Powerful Intel Pentium™ M processor at 1.4 GHz with enhanced Intel SpeedStep[1] technology and 1.0 MB of on-board L2 cache
- IEEE 1394 high-speed serial bus
- Ultrabay Plus modular drive bay
- Access IBM button and ThinkLight
- Support for optional ThinkPad Port Replicator II
- Integrated Intel 10/100 Ethernet and 56 K V.90[2] modem (V.92-designed)[3]
- RJ-45 and RJ-11 connectors; two USB 2.0 ports
- Embedded Security Subsystem (requires download of security software from IBM)
- One-year limited warranty; EasyServ on-site pickup and delivery; IBM Universal Manageability (UM) solutions
- HelpCenter 800-IBM-SERV (426-7378)
- Windows XP Home preinstalled

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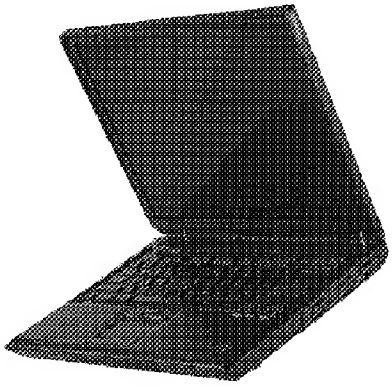
Description



Integrated communications

- Integrated 10/100 Ethernet and 56 K V.90 modem (V.92-designed)
- Intel PRO/Wireless network connection 802.11b

Other features

- IBM Embedded Security Subsystem 2.0
- IEEE 1394 high-speed serial bus
- Two USB 2.0 ports

Highly mobile design

The ThinkPad R40 notebook is one of the most versatile and affordable ThinkPad offerings to date.

- Support for Ultrabay 2000 and Ultrabay Plus options and such standard or optional devices as DVD-ROM, CD-ROM, CD-RW/DVD, diskette drive, and HDDs
- Optional ThinkPad Port Replicator II, storage, memory, and power adapter

The ThinkPad R40 notebook is designed to the Wired for Management 2.0 and PXE 2.0 manageability requirements for mobile systems.

Innovative and easy to use

The ThinkPad R40 notebook works right out of the box. Productivity and ease of use are enhanced for novices as well as experienced users. Ergonomic features include:

- Access IBM button launches Access IBM: Access the online help (requires Internet access, not included) and on-system information you need to help you set up, learn about, and enhance your ThinkPad notebook.
- Access Connections manages your connectivity environments by saving the settings for wired and wireless connections, and easily switching between them.
- Modular Ultrabay Plus: Integrated, easy-loading modular bay for fast swapping of optional Ultrabay 2000 and Ultrabay Plus devices.

With the Ultrabay Plus, you can add functions with a variety of optional devices.

- Diskette drive
- Second HDD (requires optional second HDD adapter)
- Second battery
- DVD-ROM
- CD-ROM
- CD-RW/DVD
- Zip drive 250 MB

Other features include:

- Legendary IBM keyboard: Comfortable, ergonomic keyboard with palm rest.
- UltraNav dual-pointing system, featuring TrackPoint and customized touch pad for the ultimate in pointing flexibility.
- ThinkLight keyboard light: Located on the top edge of the display, this tiny LED lets you work in low-light conditions.
- Innovative volume controls: Individual volume up, down, and mute buttons.
- Disk-to-disk recovery: The recovery software image is stored in separate hidden service partitions on the HDD. The recovery software is always available for quick recovery of the IBM preload software image.
- Backup and restore program for automatic backup and restore of critical data, applications, and configurations.

Optimized for connectivity

- Integrated Ethernet and modem with RJ-45 and RJ-11 ports
- UltraConnect™ antenna

ThinkPad R40 features

- LCD display: 358.1-mm (14.1-in) TFT with 1024 x 768 resolution

Video modes — 16 MB ATI Mobility Radeon

Resolution	TFT LCD Color Depth		
640 x 480	256,	64K,	16M
800 x 600	256,	64K,	16M
1024 x 768	256,	64K,	16M
1280 x 1024	256(8),	64K(8),	16M(8)(9)
1600 x 1200	256(8),	64K(8)(9)	
2048 x 1536	256(8),	64K(8)(9)	

Resolution	Color	External monitor(10) Refresh rate (Hz)
640 x 480	256	60, 72, 75, 85, 90, 100, 120, 160
640 x 480	64K	60, 72, 75, 85, 90, 100, 120, 160
640 x 480	16M	60, 72, 75, 85, 90, 100, 120, 160
800 x 600	256	60, 70, 72, 75, 85, 90, 100, 120, 160
800 x 600	64K	60, 70, 72, 75, 85, 90, 100, 120, 160
800 x 600	16M	60, 70, 72, 75, 85, 90, 100, 120, 160
1024 x 768	256	60, 70, 72, 75, 85, 90, 100, 120, 150, 160
1024 x 768	64K	60, 70, 72, 75, 85, 90, 100, 120, 150, 160
1024 x 768	16M	60, 70, 72, 75, 85, 90, 100, 120
1280 x 1024	256	60, 70, 75, 85, 90, 100, 120, 160
1280 x 1024	64K	60, 70, 75, 85, 90, 100, 120
1280 x 1024	16M	60, 70, 75, 85
1600 x 1200	256	60, 75, 85, 100, 120
1600 x 1200	64K	60, 75, 85, 100
1600 x 1200	16M	Not supported
2048 x 1536	256	60, 66, 70, 75
2048 x 1536	64K	60, 66, 70
2048 x 1536	16M	Not supported

- 16 MB ATI Mobility Radeon video chipset
- Processor: Powerful Intel Pentium M processor at 1.4 GHz with enhanced Intel SpeedStep technology and 1.0 MB of on-board L2 cache.
- Memory: Standard system memory of 128 MB of PC 266 MHz, DDR non-parity memory, expandable to a maximum of 2.0 GB with 128, 256, or 512 MB or 1.0 GB SO DIMMs. There are two internal slots for memory modules, one for the 128 MB of standard memory and one for a memory upgrade. To obtain the maximum 2.0 GB to which memory can be expanded, replace the 128 MB card with a 1.0 GB card and add another 1.0 GB card in the extra slot.
- PC card: Type III slot can accommodate one Type I, one Type II, or one Type III PC card via the lower connector in the slot. Both 16-bit and 32-bit cards are supported.
- Storage: Standard 20 GB HDD. The HDD can issue an alert if a failure is pending in certain circumstances. Optional 20 or 40 GB HDDs are available for the system unit or for use in the Ultrabay Plus. Two HDDs can be used concurrently. The optional second HDD adapter is required.
- Audio: Excellent sound quality and volume control.

  Audio jacks:

  - One for external stereo speakers or headphone
  - One for microphone-in
  - One for line-in on Port Replicator II
  - One for line-out on Port Replicator II
- Other features:

  - Power
  - Two USB 2.0 ports
  - Parallel port
  - CRT
  - S-Video

Serial or PS/2® ports can be obtained with the optional ThinkPad Port Replicator II.

AC adapter: This ac-to-dc converter supplies the necessary power to the computer. The ac adapter also charges the battery pack when it is installed in the computer.

Standard battery shipped with the system

Li-Ion battery pack

- A Li-Ion battery pack is an optional feature in addition to the standard battery pack shipped with the system[11]. This battery fits in the same location as the main battery.
- The battery pack is an internal power source to the computer when the ac adapter is not available. The battery pack is rechargeable and is charged using the ac adapter with the system.
- You can determine how much battery power remains by using the fuel-gauge ThinkPad utility program, which displays the percent charge remaining.

PC cards that do not support the power management function may cause the shorter battery operation hours.

Approximate operation and charging hours are:

- Power off/suspend charging[12]: 3 hr
- Charging during operation[12,13]: 3.5 hr
- Approximate hours of battery operation[13]: 6.1 hr

Software

Non-IBM software: The non-IBM software programs listed in this section may be licensed to you under the non-IBM manufacturer's, supplier's, or publisher's terms and conditions. The non-IBM manufacturers, suppliers, or publishers are responsible for providing any service or support associated with these programs. The descriptions of these programs were obtained from information made available by these companies to the general public. IBM does not warrant these products. Some software may differ from its separately available version (if available), and may not include user manuals or all program function.

IBM software available for download from the Web

- IBM Client Security Software[14]

  http://www.pc.ibm.com/us/security/secdownload.html
- IBM Director Agent

  http://www.pc.ibm.com/us/eserver/xseries/systems_management/dwnl.html
- Remote Deployment Manager

  http://www.pc.ibm.com/us/eserver/xseries/systems_management/dwnl.html

Software that may be included or preloaded on the system:

U.S. Models Software #1 (Windows XP Home)

- Microsoft Windows XP Home
- ThinkPad Configuration Utility
- Access IBM
- IBM Access Connections
- PC-Doctor Diagnostics
- Adobe Acrobat Reader
- Update Connector™,[15]
- Norton AntiVirus 2003 (OEM version)
- Rapid Restore™ PC

Warranty information

For a copy of applicable product warranties, write to:

Warranty Information
P.O. Box 12195
Research Triangle Park, NC 27709
Attn: Dept JDJA/B203

IBM makes no representation or warranty regarding vendor products or services.

Telephone support may be subject to additional charges, even during the limited warranty period. For IBM machines with on-site labor, IBM will attempt to diagnose and resolve the problem remotely before sending a technician. For IBM machines with EasyServ service, IBM will attempt to diagnose and resolve the problem remotely before sending a courier.

All offers are subject to availability. IBM reserves the right to alter product offerings and specifications at any time without notice. IBM is not responsible for photographic or typographic errors.

Accessibility by people with disabilities

The following features support use by people with disabilities:

- Controls and latches operable with one hand and minimal dexterity
- Keys discernible by touch without activating them
- Ports and connectors for connection of industry-standard devices

Reference information

1 With Intel SpeedStep, processor speed may be reduced to conserve battery power.

2 The V.90 modem can receive data at up to 56 Kbps from a compatible service provider and transmit data at up to 31.2 Kbps. Public networks currently limit maximum download speeds to about 53 Kbps. Actual speeds depend on many factors and are often less than the maximum possible.

3 Public network download speeds are limited to 53 Kbps. Upload speeds are limited to 48 Kbps for V.92 modems. Actual speeds depend on many factors and are often less than the maximum possible. V.92 functions and speeds require compatible phone line and server equipment, and download of V.92 support device driver when available. Check with your telephone and Internet service providers for availability.

4 Expandable to up to 2.0 GB of system memory. Memory options up to 1.0 GB SO DIMMs each can be added in the two available slots for memory expansion. To get the maximum 2.0 GB to which memory can be expanded, replace the 128 MB card with a 1.0 GB card and add another 1.0 GB card in the extra slot.

5 Thickness may vary at certain points on the system.

6 Variable read rate. Actual playback speed will vary and is often less than the maximum possible.

7 Storage devices such as HDDs and memory keys are measured in MB, GB, or TB. For storage, MB equals 1 million bytes, GB equals 1 billion bytes, and TB equals 1 trillion bytes; accessible capacity is less. Up to 3 GB is used in service partition. Maximum internal disk capacities may require the replacement of any standard HDD and the population of all HDD bays with the largest currently supported drives available.

8 Supported in panning mode.

9 Not supported in PowerPlay mode.

10 Supported at external monitor only. When the LCD and external monitor are used at the same time, the refresh rate may be lower.

11 Options from IBM ThinkPad R32/R40 Li-Ion battery, formerly known as the ThinkPad R32 Li-Ion battery.

12 Recharge time also varies.

13 Systems may list a battery life. In such an instance, these model numbers achieved eTesting Labs, Inc.′s BatteryMark 4.0.1, or the Ziff Davis Media Inc.′s Business Winstone 2002 BatteryMark V1.0 battery rundown time of at least the time shown. This test was performed without independent verification by the VeriTest testing division of Lionbridge Technologies, Inc. (VeriTest) or Ziff Davis Media Inc.; neither Ziff Davis Media Inc. nor VeriTest makes any representations or warranties as to these test results. For a description of the environment under which the test was performed, visit: **http://www.ibm.com/pc/ww/thinkpad/batterylife.** Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning, and other customer preferences.

14 Models with IBM Embedded Security Subsystem.

15 Update Connector is available to registered ThinkPad customers during the warranty period at no charge. Line charges may apply.

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Ultrabay, UltraNav, ImageUltra, UltraConnect, Update Connector, and Rapid Restore are trademarks of International Business Machines Corporation in the United States or other countries or both.

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IBM US Announcement Supplemental Information

October 21, 2003

Optional features

The ThinkPad® R40 notebook is compatible with peripherals and software products that run on other IBM systems.

For the latest information on options available for the ThinkPad R40 models and other ThinkPad notebooks, visit:

http://www.pc.ibm.com/options

Options for ThinkPad R40

Description	Part number
IBM 128 MB PC2100 CL2.5 DDR SDRAM SO DIMM	10K0028
IBM 256 MB PC2100 CL2.5 DDR SDRAM SO DIMM	10K0030
IBM 512 MB PC2100 CL2.5 DDR SDRAM SO DIMM	10K0032
IBM 1 GB PC2100 CL2.5 DDR SDRAM SO DIMM	10K0034
ThinkPad Multiple Battery Charger II	22P9040
IBM 72W DC Auto/Air Adapter	10K3820
ThinkPad 20 GB HDD	08K9686
ThinkPad 40 GB High Speed — 5400 rpm HDD	08K9816
ThinkPad Ultralight 8X-3X DVD-ROM Ultrabay™ 2000 Drive	22P9102
ThinkPad Zip 250MB Ultrabay 2000 Drive	00N8253
ThinkPad 24X-10X CD-ROM Ultrabay 2000 Drive	05K9233
ThinkPad 2nd Hard Drive Adapter for Ultrabay 2000	08K6068
ThinkPad Removable Diskette Drive	08K9603
IBM CD-RW/DVD-ROM Combo III Ultrabay 2000	22P6980
IBM CD-RW/DVD-ROM Combo IV Ultrabay 2000	22P6991
IBM USB 2.0 64 MB Memory Key	22P9024
IBM USB 2.0 256 MB Memory Key	22P9025
GemPC400 Smart Card Reader from IBM	31P8901
800 dpi Scroll Mouse	31P7405
800 dpi Travel Mouse	31P7410
Intel™ PRO/Wireless LAN 2100 3B Mini PCI Adapter	31P8601
IBM USB Portable CD-ROM Drive	33L5151
IBM USB 2.0 Portable CD-RW Drive	22P5297
IBM USB Portable Diskette Drive	05K9276
IBM USB Serial Parallel Adapter	22P5298
IBM 1 GB Microdrive™	07N5574
ThinkPad Monitor Stand 2001	22P5265
IBM Sleek USB Mouse	33L3244
TrackPoint® USB Spacesaver Keyboard	22P5150
IBM Sleek Mouse —Black (U.S.)	28L3673
Preferred USB Keyboard	10K3849
Rapid Access III USB keyboard (Black)	22P5185
USB Numeric Keyboard	33L3225
IBM Preferred Pro Keyboard	31P7415
IBM FlatPanel Speakers	09N4175
EMEA power cord	10K0166
Japan power cord	10K0167
other AP power cord	10K0168
IBM Micro Portable Projector	0037-A02
Space Saver II Keyboard (87-key)	28L3644
ThinkPad 72 W ac Adapter	
with Brazil power cord	22P9046
U.S./Canada/LA	22P9010
Japan	22P9011
EMEA with EU1 power cord	22P9012
with Denmark power cord	22P9013
with Africa/India power cord	22P9014
with UK power cord	22P9015
with Switzerland power cord	22P9016
with Italy power cord	22P9017
with Israel power cord	22P9018
with ANZ/ASEAN power cord	22P9019
with Argentina power cord	22P9020
with Brazil power cord	22P9045
IBM Portable Projector — Conference Room	0039-A02
IBM Projector —Value	0038-A02
High Rate Wireless LAN PC Card 128	09N9904
Cisco Aironet 802.11b Wireless Card	31P8301
IBM 802.11a PC Card	22P7501
Intel PRO/Wireless LAN 2100 3B Mini PCI Adapter	31P8601
IBM 16/4 Token-Ring Card Bus Adapter	34L4801
IBM Turbo 16/4 Token-Ring PC Card 2	34L1401
Bluetooth PC Card II	19K5796
ThinkPad R32/R40 Li-Ion Battery	
Worldwide	02K7052
Japan	02K7053
Ultrabay 2000 Li-Ion Battery	02K6646
Ultrabay Plus Device Carrier	27P5737
Ultrabay Plus Cradle for the WorkPad® c500 Series	27P5738
Ultrabay Plus Numeric Keypad	22P7330
ThinkPad Port Replicator II	74P6733
ThinkPad Mini-Dock	
without Power Cord —ANZ/ASEAN	287810A
with Power Cord —Japan	287810J
with Power Cord —Brazil	287810P
with Power Cord —US/Can	287810U
with Power Cord —Argentina	287810X
with Power Cord —EU1	67P8984
with Power Cord —Denmark	67P8985
with Power Cord —South Africa	67P8986
with Power Cord —UK	67P8987
with Power Cord —Switzerland	67P8988
with Power Cord —Italy	67P8989
with Power Cord —Israel	67P8990
with Power Cord —Saudi	92P2801

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Description	Part number
ThinkPad 72 W ac Adapter	
U.S./Canada/LA	02K6699
Japan	02K6750
EMEA with EU1 power cord	02K6751
with Denmark power cord	02K6752
with Africa/India power cord	02K6753
with UK power cord	02K6754
with Switzerland power cord	02K6705
with Italy power cord	02K6706
with Israel power cord	02K6707
with ANZ/ASEAN power cord	02K6708
with Argentina power cord	02K6709
Nylon Carry Cases (U.S./Canada only)	10K0207
Leather Carry Cases (U.S./Canada only)	10K0209

Publications

Many ThinkPad Data sheets and other publications are now available on the Web. They can be downloaded or printed free of charge.

To view or print marketing publications or data sheets on ThinkPad notebooks, visit:

http://www.ibm.com/thinkpad

- Under the ThinkPad Overview bar or on the left menu click Literature.
- Scroll down to Data Sheets and then to the ThinkPad notebook that you want information about.
- Click PDF to the right of the product.
- To print the data sheet, click Print.

To view, download, or print ThinkPad publications, visit:

http://www.pc.ibm.com/support

- Under Browser click Notebooks and PC Companions.
- On the left menu click Online Publications.
- Under Select Your Product, choose the product or family you want publications about.
- Click on the publication.
- To view the publication, click the file under File Details.
- To print, click Print.

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The Publications Center is a worldwide central repository for IBM product publications and marketing material. Extensive search facilities are provided, as well as payment options via credit card. A large number of publications are available online in various file formats, which can currently be downloaded free of charge.

Technical information

Physical specifications

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- Width: 14.1 in: 313 mm (12.3 in)
- Depth: 14.1 in: 254 mm (10.0 in)
- Height: 14.1 in: 38.9 mm (1.53 in)
- Weight (approximate):
  - Travel: 2.5 kg (5.6 lb) (with travel bezel)
  - Configured system: 2.7 kg (6.0 lb) to 3.0 kg (6.8 lb)

Accessories

- Battery pack (Li-Ion): 327 g (0.721 lb)
- ac adapter (2-pin or 3-pin)
- Power cord for ac adapter

Note: Actual specifications and weights may vary based on features, vendor components, or manufacturing processes.

Electrical specifications

- Universal ac adapter (72 W)
  - Input is 100/240 V ac, 1.5/0.9 A, 50/60 Hz
  - Output is 16 V dc, 4.5 A
- Li-Ion battery pack: 10.8 V, 4.0 AH, 8 cell/pack

Heat dissipation: 245 Btu/hr maximum

Heat emissions: 72 watts maximum

Air temperature for shipping and storage: -20° to 60°C (-4° to 140°F)

Acoustic noise level: Category 3D (office environment)

- Sound power level:
  - 4.8 bels (idling)
  - 5.1 bels (HDD seeking)
- Sound pressure level at the operator position: 40 dB (HDD seeking)

Note: All measurements are made in accordance with the International Organization of Standardization (ISO) 7779 and reported in conformance with ISO 9296.

Operating environment: ThinkPad computers are designed, built, and tested for high quality and reliability. When used properly in standard business environments, a ThinkPad system should be a reliable computing asset for many years. Harsh environments and abuse can damage ThinkPads since they are not intended to withstand extreme temperatures, dust, shock, or other severe physical environments. ThinkPad systems should not be used in unsuitable environments. For example, a ThinkPad system should not be used in non-stationary environments, such as in-vehicle installations, without additional casing or shock dissipation. IBM warrants that the ThinkPad notebook will conform to its Official Published Specifications when used in a suitable physical operating environment.

For additional information about supported environments, refer to the **Physical specifications** section.

Air temperature

- 0 to 8,000 ft:
  - Operating:
    -- 5° to 35°C (41° to 95°F) (without diskette)

  - -- 10° to 35°C (50° to 95°F) (with diskette inside unit)
  - System off: 5° to 43°C (41° to 110°F)
  - Storage/shipment: -20° to 60°C (-4° to 140°F)
  - Wet bulb (maximum): 29.4°C (85°F)
- 8,000 to 10,000 ft:
  - Operating:
    - -- 5° to 31.3°C (41° to 88°F) (without diskette)
    - -- 10° to 31.3°C (50° to 88°F) (with diskette inside unit)
  - System off: 5° to 43°C (41° to 110°F)
  - Storage/shipment: -20° to 60°C (-4° to 140°F)
  - Wet bulb (maximum): 25.7°C (78°F)

Note: The maximum temperature when the system is on is linearly decreased from 8,000 ft to 10,000 ft.

Relative humidity

- Operating:
  - 8% to 95% (without diskette)
  - 8% to 80% (with diskette inside unit)
- Storage/shipment: 5% to 95%

Altitude: 10,000 ft maximum (3,048 m)

Agency approvals

System unit:

- FCC Class-B certified to comply with FCC Rules, Part 15
- VCCI Class B
- CISPR22B
- UL-1950
- CSA C22.2 No. 950
- NOM
- SASO
- IEC950
- ACA
- MPR-II (Sweden)
- CE Mark
- CCIB (for China)
- BSMI
- CCEE (for China)
- JATE
- CER

Software requirements: The ThinkPad R40 system supports the following operating systems:

- Microsoft™ Windows™ 98 Second Edition
- Microsoft Windows 2000
- Microsoft Windows 98 Gold
- Microsoft Windows NT™ 4.0 SP6a
- Microsoft Windows XP Professional
- Microsoft Windows XP Home Edition

Note: Previous versions of these operating systems are not supported.

Operating systems other than those preinstalled on the systems may not provide full-feature functionality. To view considerations or Service Hints and Tips by operating system, visit:

http://www.pc.ibm.com/support

- In the middle of the screen, in the Quick path to a product field, enter your system's four-digit machine type and model number, such as 2722-123.
- On the left side of the screen, click Hints and Tips.

Compatibility and supported products

Contact your IBM representative for a list of supported features and options.

PC card: The ThinkPad R40 notebook conforms to the PC Card Standard 95. The new PC Card Standard encompasses both the former 16-bit Release 2.1 card standard and the new 32-bit CardBus card. Other PC card adapters that comply with the PC Card Standard may also function, but have not been tested by IBM.

Vendor software compatibility

IBM tests a large number of commonly used and available applications for compatibility with its ThinkPad systems using supporting operating systems and configurations. In general, you can expect that most vendor applications that run on supported operating systems and Intel-compatible system architectures should be compatible with a ThinkPad system. Some configurations, however, may not be compatible.

IBM does not warrant or support vendor software products, nor guarantee compatibility of those products with IBM systems. Refer to the applicable warranty and license terms provided by the respective vendors.

ThinkPad R40 systems contain BIOS in their flash ROM and a GUI to set up the system and power-management features for Windows users. BIOS provides the hardware instructions and interfaces that support the standard features of the ThinkPad R40 computer and to maintain compatibility with many software programs currently operating under Windows 98 and Windows 2000.

Limitations: For a list of tips about running various versions of operating systems, visit:

http://www.pc.ibm.com/support

Select Notebooks and PDA Support, ThinkPad R40 system, and Hints and Tips.

- The Intel PRO/Wireless LAN 2100 3B Mini-PCI Adapter in selected systems permits legal operation worldwide in regions in which it is approved. Operation on channels 12 to 14 is not permitted in all regulatory regions of the world. Consequently, the wireless LAN feature is limited to channels 1 through 11 and does not support channels 12, 13, and 14 without extended channel mode support.
- For information on DVD playback with all operating systems, visit the IBM electronic support Web site.
- IBM Embedded Security Subsystem is not supported on Windows NT and Windows 98.
- Although you can upgrade the HDD, it is not designed to be removed and reinserted on a regular basis. Repeated and frequent removal, for purposes other than to upgrade for greater capacity, can cause damage to the system. The Ultrabay Plus HDD adapter is designed to provide this flexibility with a second HDD in the Ultrabay Plus.
- If you receive an "Unsafe Removal of Device" message when you resume from suspend or hibernation on Windows 2000, you can safely close this box. Visit:

  http://support.microsoft.com/

  Type the knowledge base number (Q328580, Q323754) in the search field, and click the search button.

- The system must be in hibernated or "power-off" mode when changing the main battery.
- ZV cards are not supported.
- Serial and PS/2® ports are not included, but are available through the optional Port Replicator II. Also, USB mice and keyboard can be connected to the two available USB ports.
- ThinkPad Docking Station is not supported, only ThinkPad Port Replicator II and ThinkPad Mini-Dock.
- Simultaneous display (same screen on both CRT and LCD) does not support screen expansion (640 x 480 to 1024 x 768 or 800 x 600 to 1024 x 768) except screen centering.
- Ultrabay Plus supports hot/warm swap.
- ThinkPad battery charger (02K6719) works only with the Li-Ion battery.
- S-Video out does support simultaneous display (same screen on both LCD and TV) up to 1024 x 768 resolution.
- You can operate the system only with the embedded keyboard during POST; USB keyboard cannot be used.
- Windows 98 does not support Access Connections.
- Remote Deployment Manager is supported on Windows 2000 and Windows XP Professional only.
- Hibernation is not supported when a USB keyboard or mouse is attached on Windows 98.
- Hydravision software is free and preloaded as disabled. It can be enabled but is not officially supported by IBM.
- WinDVD does not support extended desktop on Windows 2000 or secondary display on Windows XP.

Windows NT 4.0 and Windows 2000 limitations

- When using an IBM PC token-ring card, use the token-ring device driver IBM provides, not the Microsoft PC card token-ring driver.
- Multimonitor is not supported with Windows NT 4.0.

Planning information

Cable orders: All cables are included in the shipment group.

Installability: ThinkPad R40 systems require approximately 20 minutes for installation. Installation includes unpacking, setting up, and powering on the system. Additional time is required to install optional memory and other optional features.

Packaging

Shipment group

- System unit with U.S. English keyboard
- Worldwide ac adapter
- Country-specific line cord
- Telephone cable
- Rechargeable battery pack
- TrackPoint caps
- Publications group:
  - ThinkPad R40 Series Setup Guide
  - ThinkPad R40 Series Troubleshooting Guide
  - Windows XP Home manual

Security, auditability, and control

Standard security features

Passwords: These password protection mechanisms are available:

- Power-on passwords to help protect the system from unauthorized use
- Supervisor password for use by a system administrator
- HDD password to help protect data on the removable HDD

In addition, an optional locking device in the IBM Security slot provides physical security.

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communications facilities.

Terms and conditions

This product is available for purchase under the terms of the IBM Customer Agreement (ICA).

IBM hardware products are manufactured from new parts, or new and used parts. In some cases, the hardware product may have been previously installed.

Regardless, IBM warranty terms apply.

IBM Global Financing: Yes

To obtain copies of the IBM Statement of Limited Warranty, contact your reseller or call IBM. In the United States, call 800-IBM-SERV (426-7378), or write to:

Warranty Information
P.O. Box 12195
Research Triangle Park, NC 27709
Attn: Dept JDJA/B203

Warranty period

- System hardware —One year on parts and labor
- System battery —One year

Warranty service: If required, IBM provides repair or exchange service depending on the type of warranty service specified for your computer. An IBM technician will attempt to resolve your problem over the telephone. You must follow the IBM problem determination and resolution procedures. Scheduling of service depends on the time of your call and is subject to parts availability. Service levels are response time objectives and are not guaranteed. The specified level of warranty service may not be available in all worldwide locations. Additional charges may apply outside the normal IBM service area. Contact your local IBM representative or your reseller for country- and location-specific information.

Customer replaceable unit (CRU) service: If your problem can be resolved with a CRU (keyboard, mouse, speaker, memory, HDD, or other easily replaceable part), IBM will ship the part to you for your replacement. If IBM instructs you to return the replaced CRU, you are responsible for returning it in accordance with the instructions. If you do not return the defective CRU, if IBM so instructs, within 30 days of your receipt of the replacement CRU, IBM may charge you for the replacement.

Courier or depot service (ThinkPad EasyServ): Disconnect the failing computer for collection arranged by IBM. IBM will provide a shipping container for you to return your computer to a designated service center. A courier will pick it up and deliver it to the designated service center. Following its repair or exchange, IBM will arrange the return delivery of the computer to your location. You are responsible for its installation and verification. This type of service is called ThinkPad EasyServ in the U.S.

Call IBM at 800-IBM-SERV (426-7378) to assist with problem isolation for hardware to determine if warranty service is required. If a hardware problem is identified, the HelpCenter® will either initiate the shipment of a CRU or arrange for a courier to pick up the system for overnight delivery (where available) to the repair location. Most repairs should be made within 48 hours after the system is received at the repair location (actual repair time may vary). Keep the original shipping carton for shipping to the repair location. If the original shipping carton is not available, the courier will deliver a shipping carton and return to pick up the system for delivery to the repair location.

International warranty service (IWS): IWS is available during the warranty period to customers who travel or relocate to countries where their computer is sold and serviced by IBM or IBM resellers authorized to perform warranty service. Eligible IBM computers are identified by their four-digit machine type. You can obtain IWS through the method of service, such as CRU, depot, carry-in, or on-site, provided in the servicing country. Service methods and procedures vary by country, and some service or parts may not be available in all countries. Service centers in certain countries may not able to service all models of a particular machine type. In addition, some countries may have fees and restrictions that apply at the time of service. To determine the eligibility of your computer and to view a list of countries where service is available, visit:

http://www-3.ibm.com/pc/support/site.wss/warranty/warranty.vm

For more information on IWS, refer to Services Announcement 601-034, dated September 25, 2001.

Licensing: Programs included with this product are licensed under the terms and conditions of the License Agreements that are shipped with the system.

Maintenance services — ServiceElect and ServiceSuite™

ServiceElect and ServiceSuite provide hardware warranty service upgrades, maintenance, and selected annuity support services in one agreement.

Warranty service upgrade: During the warranty period, warranty service upgrades provide an enhanced level of on-site service for an additional charge. A warranty service upgrade must be purchased during the warranty period and is for a fixed term (duration). It is not refundable or transferable and may not be prorated. If required, IBM will provide the warranty service upgrade enhanced level of on-site service that you acquired. An IBM technician will attempt to resolve your problem over the telephone and you must follow the IBM problem determination and resolution procedures. Scheduling of service depends on the time of your call and is subject to parts availability. If applicable, parts that are considered CRUs will be provided as part of the computer's standard warranty CRU service. Service levels are response time objectives and are not guaranteed.

On-site service: IBM on-site repair (IOR), 9 hours per day, Monday through Friday excluding holidays, next-business-day (NBD) response. IBM will repair the failing computer at your location and verify its operation. You must provide a suitable work area to allow disassembly and reassembly of the computer. The area must be clean, well-lit, and suitable for the purpose.

Maintenance service: If required, IBM provides repair or exchange service depending on the type of warranty service specified for your computer. An IBM technician will attempt to resolve your problem over the telephone. You must follow the IBM problem determination and resolution procedures. Scheduling of service depends on the time of your call and is subject to parts availability. Service levels are response time objectives and are not guaranteed. The specified level of warranty service may not be available in all worldwide locations. Additional charges may apply outside the normal IBM service area. Contact your local IBM representative or your reseller for country- and location-specific information.

CRU service: If your problem can be resolved with a CRU (keyboard, mouse, speaker, memory, HDD, or other easily replaceable part), IBM will ship the part to you for your replacement. If IBM instructs you to return the replaced CRU, you are responsible for returning it in accordance with the instructions. If you do not return the defective CRU, if IBM so instructs, within 30 days of your receipt of the replacement CRU, IBM may charge you for the replacement.

The following maintenance service options are available.

Courier or depot service (ThinkPad EasyServ): Disconnect the failing computer for collection arranged by IBM. IBM will provide a shipping container for you to return your computer to a designated service center. A courier will pick it up and deliver it to the designated service center. Following its repair or exchange, IBM will arrange the return delivery of the computer to your location. You are responsible for its installation and verification.

On-site service: IOR, 9 hours per day, Monday through Friday excluding holidays, NBD response. IBM will repair the failing computer at your location and verify its operation. You must provide a suitable work area to allow disassembly and reassembly of the computer. The area must be clean, well-lit, and suitable for the purpose.

Maintenance service (ICA)

Maintenance services are available for ICA legacy contracts. The preferred go-to-market offerings are ServiceElect. However, ICA legacy contracts will still be available for current customers until they are withdrawn.

Alternative service (warranty service upgrades): During the warranty period, warranty service upgrades provide an enhanced level of on-site service for an additional charge. A warranty service upgrade must be purchased during the warranty period and is for a fixed term (duration). It is not refundable or transferable and may not be prorated. If required, IBM will provide the warranty service upgrade enhanced level of on-site service that you acquired. An IBM technician will attempt to resolve your problem over the telephone and you must follow the IBM problem determination and resolution procedures. Scheduling of service depends on the time of your call and is subject to parts availability. If

applicable, parts that are considered CRUs will be provided as part of the computer's standard warranty CRU service. Service levels are response time objectives and are not guaranteed.

On-site service: IOR, 9 hours per day, Monday through Friday excluding holidays, NBD response. IBM will repair the failing computer at your location and verify its operation. You must provide a suitable work area to allow disassembly and reassembly of the computer. The area must be clean, well-lit, and suitable for the purpose.

Maintenance service: If required, IBM provides repair or exchange service depending on the type of warranty service specified for your computer. An IBM technician will attempt to resolve your problem over the telephone. You must follow the IBM problem determination and resolution procedures. Scheduling of service depends on the time of your call and is subject to parts availability. Service levels are response time objectives and are not guaranteed. The specified level of warranty service may not be available in all worldwide locations. Additional charges may apply outside the normal IBM service area. Contact your local IBM representative or your reseller for country- and location-specific information.

CRU service: If your problem can be resolved with a CRU (keyboard, mouse, speaker, memory, HDD, or other easily replaceable part), IBM will ship the part to you for your replacement. If IBM instructs you to return the replaced CRU, you are responsible for returning it in accordance with the instructions. If you do not return the defective CRU, if IBM so instructs, within 30 days of your receipt of the replacement CRU, IBM may charge you for the replacement.

The following maintenance service options are available.

Courier or depot service (ThinkPad EasyServ): Disconnect the failing computer for collection arranged by IBM. IBM will provide a shipping container for you to return your computer to a designated service center. A courier will pick it up and deliver it to the designated service center. Following its repair or exchange, IBM will arrange the return delivery of the computer to your location. You are responsible for its installation and verification.

On-site service: IOR, 9 hours per day, Monday through Friday excluding holidays, NBD response. IBM will repair the failing computer at your location and verify its operation. You must provide a suitable work area to allow disassembly and reassembly of the computer. The area must be clean, well-lit, and suitable for the purpose. On-site service is not available in all countries, and some countries have kilometer or mileage limitations from an IBM service center. In those locations where on-site service is not available, the normal in-county service delivery is used. Some repairs may require sending the ThinkPad to a service center for repair.

Packaged offerings: IBM packaged offerings provide "value packaged" maintenance services for ThinkPad customers. These offerings must be purchased during the product warranty period and are offered for a fixed term (duration). They are not refundable or transferable and may not be prorated.

- EasyServ Plus includes CRU service and ThinkPad EasyServ repair service in yearly increments for a fixed term after the warranty period has expired. Refer to the **Prices** section for offering increments and charges.
- On-site Plus includes CRU service and IOR, 9 hours a day, Monday through Friday excluding holidays, NBD response. This offering includes IOR during the warranty period and for a fixed term after the warranty period has expired. Some repairs may require the use of ThinkPad EasyServ. Refer to the **Prices** section for offering increments and charges.

Non-IBM parts support

Warranty service: IBM is now shipping machines with selected non-IBM parts that contain an IBM field replaceable unit (FRU) part number label. These parts are to be serviced during the IBM warranty period. IBM is covering the service on these selected non-IBM parts as an accommodation to customers, and normal warranty service procedures for the IBM machine apply.

Warranty service upgrades and maintenance services: Under certain conditions, IBM Integrated Technology Services repairs selected non-IBM parts at no additional charge for machines that are covered under a warranty service upgrade or maintenance service

IBM Service provides hardware problem determination on non-IBM parts (adapter cards, PCMCIA cards, disk drives, memory, and so forth) installed within IBM systems covered under the IBM warranty service upgrade or maintenance services and provide the labor to replace the failing parts at no additional charge. If IBM has technical service agreements with the manufacturers of the failing part, or if the failing part is an accommodations part (a part with an IBM FRU label), IBM may also source and replace the failing parts at no additional charge. For all other non-IBM parts, customers are responsible for sourcing the parts. Installation labor is provided at no additional charge, if the machine is covered under a warranty service upgrade or maintenance services.

IBM hourly service rate classification: One

International service for ThinkPads: International service for ThinkPads is a hardware repair service for customers who have purchased an IBM warranty service upgrade, maintenance services, or package offerings. This service is provided at no additional charge. International service is available wherever IBM sells and services ThinkPad products. Customers are required to register for this service. For more information, refer to Services Announcement 698-019, dated March 24, 1998. To register, call one of the following offices:

- United States: 800-497-7426 or 248-740-1215
- Scotland: 44-1475-893638
- Japan: 81-462-73-7598
- Australia: 61-2-9354-4171

ServicePac® offerings

Warranty and maintenance options: The announced products may be eligible for ServicePacs for warranty and maintenance options, convenient prepackaged offerings for warranty service upgrades and maintenance services.

Installation services: The announced products may be eligible for ServicePacs for installation services, convenient prepackaged offerings for installation services. Refer to the **Prices** section for information on the availability of ServicePac offerings. For additional ServicePac information, visit:

http://www-1.ibm.com/services/its/us/servicepac.html

Field-installable features: Yes

Model conversions: No

Machine installation: Customer setup. Customers are responsible for installation according to the instructions IBM provides with the Machine.

Graduated charges: No. This product does not contain licensed internal code or licensed machine code.

Prices

Mobile products

Description	Order number	Machine type/ model	IBM list price[16]
IBM U.S. English Machines			
Software #1C (Windows XP Home)			
ThinkPad R40 20.0 GB, Intel Pentium™ M processor at 1.4 GHz, 128 MB, 24x-10x CD-ROM, 14.1-in TFT (1024 x 768), modem, Ethernet, IBM Embedded Security subsystem, 16 MB ATI Mobility Radeon video chipset, Intel PRO/ Wireless 802.11b, IEEE 1394	27229FU	2722-9FU	$1,179

ServicePac for warranty and maintenance

Description	Part number
1-year IOR 9 x 5 NBD	30L9188
2-year IOR 9 x 5 NBD	30L9189
3-year IOR 9 x 5 NBD	30L9195
4-year IOR 9 x 5 NBD	69P9194
5-year IOR 9 x 5 NBD	69P9196
2-year P&L P/U Depot	30L9191
3-year P&L P/U Depot	30L9192
4-year P&L P/U Depot	69P9195
5-year P&L P/U Depot	69P9197

ServicePac for post warranty/warranty service upgrade service

Description	Part number
1-year IOR 9 x 5 NBD	69P9381
1-year P&L P/U Depot	69P9380
2-year IOR 9 x 5 NBD	96P2075
2-year P&L P/U Depot	96P2074

ServicePac for installation services

Description	Part number
Basic Installs 1 to 25 Units	21P2001
Basic Install + Data Migration 1 to 25 units	21P2076

Maintenance service (legacy) charges

Alternative service (warranty service upgrades)

On-site upgrade 9 x 5 for ThinkPads with a 1-year warranty

$49

Maintenance service

EasyServ 1-year courier depot

$252

1-year IOR 9 x 5

$315

Packaged offerings

EasyServ Plus depot service for ThinkPads on a 1-year warranted product

2 years	3 years
$99	$132

On-site plus service for ThinkPads on a 1-year warranted product

2 years	3 years
$197	$243

For ServiceElect (ESA) maintenance service charges, contact IBM Global Services at 888-IBM-4343 (426-4343).

IBM Global Financing: IBM Global Financing offers competitive financing to credit-qualified customers to assist them in acquiring IT solutions. Offerings include financing for IT acquisition, including hardware, software, and services, both from IBM and other manufacturers or vendors. Offerings (for all customer segments: small, medium, and large enterprise), rates, terms, and availability can vary by country. Contact your local IBM Global Financing organization or visit:

http://www.ibm.com/financing

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